

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of

YONG JIANG ET AL.

Serial No.: 10/582,908

Filed: JUNE 14, 2006

Atty. Docket: NL031494US1

Confirmation No.: 4998

Examiner: STEPHEN J. RALIS

Group Art Unit: 3742

TITLE: STEAM IRONING DEVICE HAVING HEATING MEANS, PUMP, AND
CONTROL CIRCUIT TO CONTROL RATIO OF FLUID FLOW RATE OF
PUMP TO POWER OF HEATING MEANS

**Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450**

REPLY BRIEF

Sir:

Appellants herewith respectfully present its Reply Brief as follows:

ARGUMENT/REMARKS

In a Response to Argument section of the Examiner's Answer starting on page 20 and continuing through page 24, with regard to the 35 U.S.C. §112, first paragraph rejection pertaining to the written description requirement and the enablement requirement (hereinafter collectively, "the 35 U.S.C. §112, first paragraph rejections"), a tortured analysis of the language of the present application is provided to arrive at the conclusion that the present application does not provide a written description nor enablement for the "valve being controlled to be open if a ratio between the flow rate (g/min) of the pump and the power (W) of the heating means is in a range of 1:20 to 1:38 to control wetness of steam delivered by the atomizing device otherwise said valve is controlled to be closed" as recited in claim 1.

This analysis provided in the Examiner's Answer avoids that which is evident to a person of ordinary skill in the art from a simple review of the specification.

The presentation of what is provided in the specification is discussed in detail in the Appeal Brief and will not be reproduced herein although a review of the Appeal Brief is respectfully requested. Most of the Examiner's Answer is merely a restatement of the rejection contained in the Final Office Action and will not be addressed again herein.

It is undisputed that the application provides (emphasis added) "control means ... for controlling opening and closing of said valve, said valve being controlled to be open if a ratio between the flow rate (g/min) of the pump and the power (W) of the heating means is in a

range of 1:20 to 1:38 to control wetness of steam delivered by the atomizing device." (See, Examiner's Answer, page 4 where it is admitted that the Examiner can find disclosure for this recitation in the patent application.) The problem raised in the 35 U.S.C. §112, first paragraph rejections stems from a position that the application does not provide support for "otherwise said valve is controlled to be closed" recitation in claim 1.

Yet a simple review of what is admitted in the Examiner's Answer (see, Examiner's Answer, page 4) and what is undisputedly shown in the application is that the condition for the valve being controlled to be open is provided and not disputed and further that there is clear support for the control means also controlling closing of the valve.

Each of the Abstract, page 1, lines 18-23 and original claim 1 of the present application state (emphasis added):

control means ... for controlling the opening and closing of said valve, said valve being open if the ratio between the flow rate (g/min) of the pump and the power (W) of the heating means is in a range of 1:20 to 1:38.

It is respectfully submitted that since the above cited portions of the application provides for the control means controlling closing of the valve and further provides for the condition when the valve is controlled to be open, clearly the condition for the valve to be controlled closed is otherwise then when the valve is controlled to be open. What logical interpretation of the language could result from the interpretation provided in the Examiner's Answer? The Examiner's Answer admits that the Application provides when the valve is controlled be open, yet by the interpretation provided in the Examiner's Answer, the valve is

not otherwise controlled to be closed. What does it mean to control the valve to be open and closed if the valve is otherwise open or uncontrolled when not controlled to be open?

Clearly the language of the application provides for controlling both of opening and closing and the conditions for the valve to be controlled to be open which necessarily sets out the conditions for the valve to be otherwise controlled to be closed. Clearly it is by controlling the valve to be otherwise closed that the benefits of controlling the valve to be open if the ratio between the flow rate (g/min) of the pump and the power (W) of the heating means is in a range of 1:20 to 1:38 are achieved. In fact, by the interpretation provided in It is respectfully submitted that the interpretation provided in the Examiner's Answer ignores that which is plain in the application to a person of ordinary skill in the art, namely that the valve is controlled to be closed to achieve the desired wetness of the steam in the steam generator when the desired ratio of flow rate to heating is not achieved (e.g., see, patent application, page 1, line 24 through page 2, line 3).

It is respectfully submitted that as should be clear from the above discussion, the Appellants clearly provide a written description and enablement of the invention including "the valve to be otherwise closed" as recited in claim 1.

As such, the Appellants have provided a written description of their invention to include a control means for controlling opening and closing of a control valve and have set out parameters which clearly must describe the claimed invention in sufficient detail that one skilled in the art can reasonably conclude that the inventor had possession of the claimed invention. See, e.g., Moba, B.V. v. Diamond Automation, Inc., 325 F.3d 1306, 1319, 66

USPQ2d 1429, 1438 (Fed. Cir. 2003); Vas-Cath, Inc. v. Mahurkar, 935 F.2d at 1563, 19 USPQ2d at 1116. Further, it is respectfully submitted that the application as filed describes the invention in such terms that one skilled in the art can make and use the claimed invention and communicates to the interested public in a meaningful way the invention as set out in the claims.

Accordingly, it is respectfully requested that the Final Office Actions rejection of claims 1-8 under the written description requirement and under the enablement requirement be reversed.

With regard to the Response to arguments section of the Examiner's Answer regarding claim 1 and 2 which are said to be unpatentable over Netten in view of van der Meer and Maykemper, it is clear that the Examiner's answer relies on Van der Meer for showing that which is admitted missing from each of Netten and Maykemper, however, it is respectfully submitted that reliance on Van der Meer is misplaced.

Van der Meer is discussed in detail in the Appeal Brief. It is respectfully submitted that there is no teaching by van der Meer that the control circuit specifically controls the steam valve (46) to open if the ratio between the flow rate (g/min) of the pump and the power (W) of the heating means is in a range of 1:20 to 1:38, otherwise said valve is controlled to be closed although several sections of van der Meer are cited in the Examiner's Answer in support of this proposition. Each section of van der Meer cited in the Examiner's Answer starting on page 27 of the Examiner's Answer (Response to Arguments

section of the Examiner's Answer) is set out herein to enable a clear showing of what is in fact is shown by van der Meer and more importantly, what is not taught, disclosed or suggested by van der Meer.

Vvan der Meer in col. 11, line 47 through col. 12, line 22 states (emphasis added):

FIG. 4a shows a steam program which starts at a steam delivery of 35 g/min, falls to 15 g/min during the ironing cycle, and is stabilized at that level. In this case there is only one steam program which is used in all circumstances.

The program shown in FIG. 4b also starts at a level of about 35 g/min, but subsequently falls to a level which is preset by means of a control button on the iron. The quantity of steam can, for example, be indicated by 1, 2 or 3 illuminating spots for, say, a steam delivery of 15, 20 or 25 g/min.

In the graph shown in FIG. 4c there are three different starting levels for the steam. All three of them are stabilized at the same level of approximately 15 g/min. The control and indication are the same as in the variant mentioned above.

FIG. 4d shows a combination of the above two variants. Both the beginning and end level of the steam are variable. In the graphs shown they are not adjustable separately. Each starting level thus has its own end level. The operation and indication are the same as what are described in the case of FIG. 4b.

In the variant according to FIG. 4e the end level of the steam falls gradually as a function of time.

The initial level of the steam always depends on the initial pressure in the steam generator, which is determined by a pressure controller or by regulation of the temperature. In the variants according to FIG. 4a, 4b and 4e that pressure is always equal to the switching pressure of the pressure controller, i.e. to the excess pressure. The speed at which the steam level decreases depends on the pipe resistance and can be constant or can be set by means of a control valve fitted for the purpose. In the heating-up phase the steam generator is brought to pressure and in the stand-by phase it is maintained at pressure after being brought to pressure again if necessary.

During an ironing cycle the steam valve is opened, and pressure and temperature in the tank decrease while the steam flows away. The steam level is stabilized at a particular level by supplying an adequate quantity of energy to the tank. For 15 g/min it is 600 W. This means that a 1300 W element has to be on 600/1300th part of the time.

It is interesting to note that while van der Meer discusses various steam flow rates with reference to FIGs. 4a-4e and the above discussion of those figures contained in col. 11, line 47 through col. 12, line 22, the only discussion related to the steam valve is that "during an ironing cycle the steam valve is opened ..." (See, van der Meer, Col. 12, line 16.) In the following section, van der Meer makes clear that the (emphasis added) "steam level is stabilized at a particular level by supplying an adequate quantity of energy to the tank." (See, van der Meer, Col. 12, lines 18-20.)

The Examiner's Answer goes on to cite van der Meer col. 10, line 13 through col. 11, line 3, cols. 13-16 and claims 13, 21 and 22, which frankly have little that is relevant or of interest, certainly the Examiner's Answer makes no attempt to point out why these large sections of van der Meer are interesting. Claim 13 and col. 7, lines 39-42 (not cited in the Examiner's Answer) comes closest to any description of the operation of the valve and states "the control circuit is equipped for closing the steam valve when the position detector indicates that the iron is in a position other than the position occurring during normal use." This recitation of van der Meer clearly does not teach, disclose or suggest "control means ... for controlling opening and closing of said valve, said valve being controlled to be open if a ratio between the flow rate (g/min) of the pump and the power (W) of the heating means is in a range of 1:20 to 1:38 to control wetness of steam delivered by the atomizing device otherwise said valve is controlled to be closed" as recited in claim 1.

In fact, it is clear that in van der Meer, the steam valve is controlled merely based on a position of the iron.

Accordingly, it is respectfully submitted that the device of claim 1 is not anticipated or made obvious by the teachings of Netten in view of van der Meer and Maykemper. For example, Netten in view of van der Meer and Maykemper does not teach, disclose or suggest, a device that amongst other patentable elements, comprises (illustrative emphasis added) "control means ... for controlling opening and closing of said valve, said valve being controlled to be open if a ratio between the flow rate (g/min) of the pump and the power (W) of the heating means is in a range of 1:20 to 1:38 to control wetness of steam delivered by the atomizing device otherwise said valve is controlled to be closed" as recited in claim 1.

As previously pointed out, Van de Meer which is relied on for this recitation in the claims merely provides for the valve to be closed when the iron is not in an operating position and also provides examples of various steam flow rates however, as should be clear, does not teach, disclose or suggest the claim recitations.

Based on the foregoing, the Appellants respectfully submit that independent claim 1 is patentable over Netten in view of van der Meer and Maykemper and notice to this effect is earnestly solicited.

With regard to the rejection of claims 1 and 2 over Netten in view of van der Meer, Vogelmann and Maykemper, no new arguments are provided in the Examiner's Answer so it is sufficient to state that in this rejection, van der Meer is cited for allegedly showing the same recitations from the claim as discussed in great detail above with regard to Netten in view of van der Meer and Maykemper.

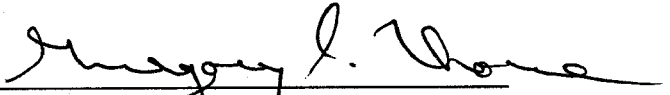
Accordingly, it should be clear that an addition of Vogelmann to show an electronically controlled valve under control of a microprocessor based controller does not cure the deficiencies discussed above regarding Netten, van der Meer and Maykemper.

Based on the foregoing, the Appellants respectfully submit that independent claim 1 is patentable over Netten in view of van der Meer, Vogelmann and Maykemper and notice to this effect is earnestly solicited.

CONCLUSION

The specification meets the requirements of a specification and complies with both of the written description requirement and the enablement requirement. Further, claims 1-8 are patentable over any combination of Netten, van der Meer, Vogelmann, Maykemper and Leta. Thus the Examiner's rejection of the specification and claims 1-8 should be reversed.

Respectfully submitted,

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